

July 21, 2016

Meagan E. Ormand  
Golder Associates Inc.  
2108 W. Laburnum Ave.  
Suite 200  
Richmond, VA 23227

RE: Project: Bremo Monthly Process  
Pace Project No.: 92305457

Dear Meagan Ormand:

Enclosed are the analytical results for sample(s) received by the laboratory on July 18, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole Gasiorowski  
nicole.gasiorowski@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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July 21, 2016  
Page 2

cc: Ron DiFrancesco, Golder Associates Inc.  
Martha Smith, Golder Associates Inc.  
Mike Williams, Golder Associates Inc



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Bremo Monthly Process

Pace Project No.: 92305457

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## SAMPLE ANALYTE COUNT

Project: Bremo Monthly Process

Pace Project No.: 92305457

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92305457001	T4-160717-2145-S3	EPA 200.7	RVK	8	PASI-O

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Bremo Monthly Process

Pace Project No.: 92305457

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**Method:** EPA 200.7

**Description:** 200.7 MET ICP

**Client:** Golder\_Dominion\_Bremo

**Date:** July 21, 2016

### General Information:

1 sample was analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Bremo Monthly Process

Pace Project No.: 92305457

Sample: T4-160717-2145-S3		Lab ID: 92305457001		Collected: 07/17/16 21:45		Received: 07/18/16 11:42		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP		Analytical Method: EPA 200.7   Preparation Method: EPA 200.7							
Aluminum	130	ug/L	100	1	07/19/16 11:31	07/19/16 15:43	7429-90-5		
Barium	266	ug/L	10.0	1	07/19/16 11:31	07/19/16 15:43	7440-39-3		
Beryllium	ND	ug/L	1.0	1	07/19/16 11:31	07/19/16 15:43	7440-41-7		
Boron	1160	ug/L	50.0	1	07/19/16 11:31	07/19/16 15:43	7440-42-8		
Cobalt	ND	ug/L	10.0	1	07/19/16 11:31	07/19/16 15:43	7440-48-4		
Iron	ND	ug/L	250	1	07/19/16 11:31	07/19/16 15:43	7439-89-6		
Molybdenum	113	ug/L	10.0	1	07/19/16 11:31	07/19/16 15:43	7439-98-7		
Vanadium	56.1	ug/L	10.0	1	07/19/16 11:31	07/19/16 15:43	7440-62-2		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Bremo Monthly Process  
Pace Project No.: 92305457

QC Batch:	309692	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET
Associated Lab Samples:	92305457001		

METHOD BLANK: 1641778 Matrix: Water  
Associated Lab Samples: 92305457001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	07/19/16 15:19	
Barium	ug/L	ND	10.0	07/19/16 15:19	
Beryllium	ug/L	ND	1.0	07/19/16 15:19	
Boron	ug/L	ND	50.0	07/19/16 15:19	
Cobalt	ug/L	ND	10.0	07/19/16 15:19	
Iron	ug/L	ND	250	07/19/16 15:19	
Molybdenum	ug/L	ND	10.0	07/19/16 15:19	
Vanadium	ug/L	ND	10.0	07/19/16 15:19	

LABORATORY CONTROL SAMPLE: 1641779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	2500	2520	101	85-115	
Barium	ug/L	250	257	103	85-115	
Beryllium	ug/L	25	26.3	105	85-115	
Boron	ug/L	2500	2490	100	85-115	
Cobalt	ug/L	250	260	104	85-115	
Iron	ug/L	2500	2520	101	85-115	
Molybdenum	ug/L	250	250	100	85-115	
Vanadium	ug/L	250	253	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1641780 1641781

Parameter	Units	92305463001		MS		MSD		MS		MSD		% Rec		RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	% Rec	Conc.		
Aluminum	ug/L	157	2500	2500	2500	2700	2700	102	102	70-130	0				
Barium	ug/L	269	250	250	250	535	530	106	105	70-130	1				
Beryllium	ug/L	ND	25	25	25	26.6	26.7	106	107	70-130	0				
Boron	ug/L	1190	2500	2500	2500	3730	3740	102	102	70-130	0				
Cobalt	ug/L	ND	250	250	250	259	259	104	104	70-130	0				
Iron	ug/L	ND	2500	2500	2500	2550	2540	101	101	70-130	0				
Molybdenum	ug/L	105	250	250	250	361	361	102	102	70-130	0				
Vanadium	ug/L	43.5	250	250	250	300	301	103	103	70-130	0				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: Bremo Monthly Process

Pace Project No.: 92305457

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

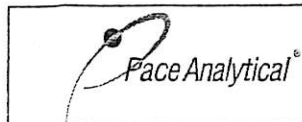
Project: Bremo Monthly Process

Pace Project No.: 92305457

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92305457001	T4-160717-2145-S3	EPA 200.7	309692	EPA 200.7	309694

## REPORT OF LABORATORY ANALYSIS

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
Document No.:  
**F-MEC-CS-009-Rev.03**

Document Revised: May 24, 2016  
Page 1 of 2  
Issuing Authority:  
Pace Mechanicsville Quality Office

Page 2 of 2 for Internal Use ONLY

**Sample Condition Upon Receipt**

Client Name:

Golder/Bremo

Project #:

**WO# : 92305457**



92305457

Courier: ☐ Commercial ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Pace ☐ Other: \_\_\_\_\_

Custody Seal Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Date/Initials Person Examining Contents: 7-18-16

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: \_\_\_\_\_

Thermometer: ☒ RMD001 ☐ \_\_\_\_\_ Type of Ice: ☒ Wet ☐ Blue ☐ None

☒ Samples on ice, cooling process has begun

Correction Factor: **0.0°C** Cooler Temp Corrected (°C): 1.3

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil ( ☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>WW</u>			
All containers needing acid/base preservation have been checked?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	HNO3 pH<2 HCl pH<2 H2SO4 pH<2 NaOH pH>12 NaOH/ZnOAc pH>9
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Samples checked for dechlorination?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/Sample \_\_\_\_\_  
Discrepancy: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
Required Client Information:

Company: **Goldier Associates**  
Address: **2108 W Laburnum Ave, Ste 200**  
City: **Richmond, VA 23227**  
Email To: **Mormand@goldier.com**  
Phone: **804-551-0129** Fax: **804-368-2900**  
Requested Due Date/AT: **3-2-1**

**Section B**  
Required Project Information:

Report To: **Mormand@goldier.com**  
Copy To: **Martha\_Smith@goldier.com**  
Purchase Order No.: **Ron\_Difrancesco@goldier.com**  
Project Name: **Brieno Monthly Process**  
Project Number: **1520-347 200**

**Section C**  
Invoice Information:

Attention: **Meagan Ormand**  
Company Name: **Goldier Associates**  
Address: **galapalazienty\_invoices@goldier.com**  
Reference: **Pace Project Manager**  
Site Location: **VA**

Page: **1** of **1**

**REGULATORY AGENCY**

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER  
☐ UST ☐ RCRA ☐ OTH

**Requested Analysis Filtered (Y/N)**

ITEM #	Section D Required Client Information	Valid Matrix Codes CODE DRAINAGE WATER WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIFE AIR OTHER TISSE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
					DATE	TIME	DATE			TIME	DATE	TIME	DATE	TIME	DATE				
1	T-4-160717-2145-53		WW	G			7/17/16	3:45	3										
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

**ADDITIONAL COMMENTS**

All analyses to be performed under Goldier-Pace MSA dated 12/19/2008

**RELINQUISHED BY / AFFILIATION**

DATE: **7/18/16** TIME: **11:42**

**ACCEPTED BY / AFFILIATION**

DATE: **7/18/16** TIME: **11:42**

**SAMPLE CONDITIONS**

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: **Brett Diehl**  
SIGNATURE of SAMPLER: **[Signature]**  
DATE Signed (MM/DD/YY): **7/17/16**  
Temp in °C: **13**  
Received on Ice (Y/N):   
Custody Sealed Cooler (Y/N):   
Samples Intact (Y/N):

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Pace Analytical Services  
Suite 100  
9800 Kincey Ave  
Huntersville NC 28078

Report Date: July 21, 2016

**Project: Bremo Monthly Process**Submittal Date: 07/19/2016  
Group Number: 1684194  
PO Number: NMG 15787  
State of Sample Origin: VAClient Sample Description

T4-160717-2145-S3 Water

Lancaster Labs

(LL) #

8480088

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Pace Analytical Services

Attn: Nicole Gasiorowski

Respectfully Submitted,

Bonnie Stadelmann  
Senior Project Manager

(312) 590-3133

Sample Description: T4-160717-2145-S3 Water  
92305457

LL Sample # WW 8480088  
LL Group # 1684194  
Account # 10945

Project Name: Brema Monthly Process

Collected: 07/17/2016 21:45

Pace Analytical Services

Submitted: 07/19/2016 09:25

Suite 100

Reported: 07/21/2016 11:03

9800 Kinsey Ave

Huntersville NC 28078

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
12941	Free Cyanide	n.a.	< 10.0	10.0	1

## Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12941	Free Cyanide	OIA-1677-09	1	16201941101A	07/20/2016 01:36	Joseph E McKenzie	1

## Quality Control Summary

Client Name: Pace Analytical Services  
Reported: 07/21/2016 11:03

Group Number: 1684194

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	LOQ
	mg/l	mg/l
Batch number: 16201941101A	Sample number(s): 8480088	
Free Cyanide	< 10.0	10.0

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16201941101A	Sample number(s): 8480088								
Free Cyanide	0.0400	0.0403			101		86-132		

### MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16201941101A	Sample number(s): 8480088 UNSPK: P476616									
Free Cyanide	< 0.0060	0.0200	0.0186	0.0200	0.0196	93	98	86-132	5*	3

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

## Chain of Custody

A: 10945

G: 168 4194

S: 8480088



Workorder: 92305457

Workorder Name: Brema Monthly Process

Results Requested By: 7/21/2016

Report / Invoice To		Subcontract To		Requested Analysis																	
Nicole Gasiorowski Pace Analytical Charlotte 9800 Kinsey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com		Sample Administration Eurofins Lancaster Laboratories Gnu. 2425 New Holland Pike Lancaster, PA 17601																			
State of Sample Origin: VA				Preserved Containers								LAB USE ONLY									
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	MSL	1	2	3	4	5	6					7	8	9	10	11	12
1	T4-160717-2145-S3	7/17/2016 21:45	92305457001	Water	2																
2																					
3																					
4																					
5																					
														Comments							
Transfers	Released By	Date/Time	Received By	Date/Time																	
1	Rachel Burruss	7-18-16 1540																			
2																					
3			De Heber	7-19-16 925																	
Cooler Temperature on Receipt 4.7 °C		Custody Seal Y or (N)		Received on Ice (Y) or N		Samples Intact (Y) or N															

Client: Pace**Delivery and Receipt Information**

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>07/19/2016 9:25</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>VA</u>		

**Arrival Condition Summary**

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace $\geq$ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Joseph Huber (7831) at 10:05 on 07/19/2016***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	32170023	4.7	IR	Wet	Y	Loose	N



# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and  $<$  the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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